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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,695	11/09/2001	Hideo Yamamoto	Q67179	5833

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EXAMINER
MCCHESNEY, ELIZABETH A

ART UNIT	PAPER NUMBER
2644	

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/986,695	Applicant(s) YAMAMOTO ET AL.	
	Examiner Elizabeth A McChesney	Art Unit 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 10/4/02

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-9 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is in response to applicant's response filed 10/4/02. Claims 1-9 are now pending in the present application.

2. The indicated allowability of claims 2-5 are withdrawn in view of the newly discovered reference(s) to Liebel et al. (US Patent No. 5,046,106). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders et al. (US Patent No. 5,263,188) in view of Liebel et al. (US Patent No. 5,046,106).

Regarding **claim 1**, Sanders et al. (hereinafter, "Sanders") discloses a vehicle equipped with front and rear speakers, includes a fade control which is used to apportion the sound volume between the front and rear speakers (col. 1-lines 17-20). Sanders fails to specifically point out that while the fader provides fading between the front and rear speakers it does so with out changing the overall volume. The examiner maintains that it is well known in the art to fade between the front and rear speakers of a

vehicle in which they are faded in proportion to each other while the overall volume remains the same. It is understood, in a vehicle, once the volume is set, the front and rear speakers can be adjusted (through the use of a typical fader, without affecting the previously set volume. Liebel et al. (hereinafter, "Liebel") discloses a typical vehicle sound system which includes a fader for varying the relative intensity of sound radiated form the front and rear speakers wherein the fader effects the relative intensity without a substantial change in the total sound intensity of the system (col. 1-lines 8-15). Liebel further discloses circuitry of a balance control and a fader wherein it is inherent that a computing means is provided for the fading of the front and rear speakers (see figure 6). It is inherently taught that as the fader fades out or attenuates, the audio signal, from either the front or rear channel, by some arbitrary value, such as K1, results in fading in the audio signal of the opposite, either the front or rear channel, by some arbitrary value, such as k1. The computing unit and control unit is inherently taught by the reference in that the components are necessary for such an operation to occur. It would have been obvious for one of ordinary skill in the art to provide a fader, which provides the operation of fading between the front and rear speakers in a vehicle without an overall volume change as taught by references.

Regarding **claims 2 and 3**, Sanders et al. (hereinafter, "Sanders") discloses a vehicle equipped with front and rear speakers, includes a fade control which is used to apportion the sound volume between the front and rear speakers (col. 1-lines 17-20). Sanders fails to specifically point out that while the fader provides fading between the front and rear speakers it does so with out changing the overall volume. The examiner

maintains that it is well known in the art to fade between the front and rear speakers of a vehicle in which they are faded in proportion to each other while the overall volume remains the same. It is understood, in a vehicle, once the volume is set, the front and rear speakers can be adjusted (through the use of a typical fader, without affecting the previously set volume. Liebel et al. (hereinafter, "Liebel") discloses a typical vehicle sound system which includes a fader for varying the relative intensity of sound radiated form the front and rear speakers wherein the fader effects the relative intensity without a substantial change in the total sound intensity of the system (col. 1-lines 8-15). Liebel further discloses circuitry of a balance control and a fader wherein it is inherent that a computing means is provided for the fading of the front and rear speakers (see figure 6). It is inherently taught that as the fader fades out or attenuates, the audio signal, from either the front or rear channel, by some arbitrary value, such as K1, results in fading in the audio signal of the opposite, either the front or rear channel, by some arbitrary value, such as k1. The computing unit and control unit is inherently taught by the reference in that the components are necessary for such an operation to occur. It would have been obvious for one of ordinary skill in the art to provide a fader, which provides the operation of fading between the front and rear speakers in a vehicle without an overall volume change as taught by references. It is inherently taught by the references that the prescribed position would be the center between the front seat and the rear seat wherein it is the position that the front and rear speakers would be in a relationship of 50-50 signal output. Any fading from this point would result in a stronger signal either

in the front or the rear, depending on the direction of the fade, and an opposite, proportional change from the other (either front or rear).

Regarding **claims 4 and 5**, Sanders in view of Liebel discloses everything claimed as applied above (see claim 3). It is inherently taught by the references that at the prescribed position, the center between the front and rear speakers, the signal outputting from this point would be a 50-50 relationship, an equal amount from each speaker. Therefore the attenuations are computed by the prescribed position in relation to each respective speaker. For, example a level adjusting fade of 10% (an arbitrary k1) in the front would results in an increase of 10% in the rear, which is proportional in relation to the prescribed position.

Regarding **claim 6**, Sanders in view of Liebel discloses everything claimed as applied above (see claim 1). It is inherently taught by the references that the prescribed position would be the center between the front seat and the rear seat wherein it is the position that the front and rear speakers would be at a 50-50 position. Any fading from this point would result in a stronger signal either in the front or the rear, depending on the direction of the fade, and an opposite, proportional change in the other (either front or rear). At a 50-50 position, a fade increase of 10% in the front would result in a 10% decrease in the rear and without substantially changing the overall volume.

Regarding **claim 7**, it is inherent that the prescribed position has previously recorded attenuation references wherein the changes made through the fader would therefore result in a computation of the related signal. For example a change in the

fader of 10% (as a previously recorded setting) would result in the corresponding 10% change in the signal.

Regarding **claim 8**, see Examiner's comments in Claim 6.

Regarding **claim 9**, see Examiner's comments in Claim 7.

Claim Rejections - 35 USC § 103

5. following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claim 1** is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders et al. (US Patent No. 5,263,188) in view of Shoda et al. (US Patent No. 5,177,801).

Regarding **claim 1**, Sanders et al. (hereinafter, "Sanders") discloses a vehicle equipped with front and rear speakers, includes a fade control which is used to apportion the sound volume between the front and rear speakers (col. 1-lines 17-20). Sanders fails to specifically teach the fader in relation to the front and rear speakers in detail. Shoda et al. (hereinafter, "Shoda") discloses a cross fader that fades-in or fades-out audio signals by moving an operation knob. When a channel is selected, from the PGM bus, the channel is faded out wherein when the channel is selected, from the PST bus, the channel is faded in (col. 1-lines 30-36). As shown in figure 4, the fader fades out or attenuates, the audio signal of a program (PGM) channel (which could be either the front or rear channel) by some arbitrary value, such as K1, and therefore the fader

fades in or multiplies the audio signal of the (PST) channel (which could be either the front or rear channel) by some arbitrary value, such as k1. The computing unit and control unit is inherently taught by the reference in that the components are necessary for such an operation to occur. Figure 4 of Shoda shows the 50-50 relationship as one channel is fading out the other is proportionally fading in therefore the overall operation is equivalent.

Response to Arguments

7. Applicant's arguments filed on October 4, 2002 have been fully considered but they are not persuasive. The Examiner maintains that it is well known in the art that faders commonly respond between the front and rear speakers of a vehicle in a proportional manner. The volume is set by the user and when the setting of the fader is in the middle or center adjustment the speakers are providing a balanced signal however the fader is used when it is desired to increase or decrease a signal in either the front or rear of the vehicle. Liebel suggests that this can be provided without effecting the overall volume, which would therefore inherently teach that if one signal was decreasing the other would increase in order to maintain the same volume level.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

d'Alayer de Costemore d'Arc (US Patent No. 5,271,063) discloses controls for a vehicle audio/video apparatus.

Koizumi et al. (US Patent No. 5,745,583) discloses an audio playback system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. McChesney whose telephone number is (703) 308-4563. The examiner can normally be reached Monday – Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

EAM
December 16, 2002

PING LEE
PRIMARY EXAMINER

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trade[redacted]k Office
Address: ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.

EXAMINER	
ART UNIT	PAPER
	5

DATE MAILED:

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